WEB-BASED APPLICATION DESIGN FOR SHIPPING AND RECEIVING GOODS SYSTEM USING POAC ANALYSIS METHOD WITH OBJECT-ORIENTED SYSTEM APPROACH

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ABSTRACT

With the current development of Information Technology, of course, it has a big impact on very significant changes in various fields. Sinar Baru Property is a property development company. Until now the system for sending and receiving goods at Sinar Baru Property is still conventional and not yet web-based and has not been planned, organized, actuated, controlled, so that it is constrained in needing materials for construction. The purpose of this research is to find out the system that is currently running, as well as to design a web-based system for sending and receiving goods using planning, organizing, actuating, controlling analysis at Sinar Baru Property. The research method used is descriptive method and in analyzing and designing the system is the method of analysis and object-oriented design using the Unified Modeling Language. The results of this study are in the form of an application, namely a web-based information system for sending and receiving goods that has a good level of quality and can function to provide information about shipping and receiving data quickly, precisely and accurately and supports digital concepts.

Keywords: Analysis, POAC, Shipping, Receiving, Object-Oriented

INTRODUCTION

Sinar Baru Property is a property development company located in Tangerang. Until now the system for sending and receiving goods at Sinar Baru Property is still conventional and not yet web-based and has not been planned, organized, actuated, controlled, so that it is constrained in needing materials for property development (Ikram, M. 2021; Vikasari, 2018). The purpose of this research is to find out the system that is currently running, as well as to design a web-based system for sending and receiving goods using planning, organizing, actuating, controlling (POAC) analysis at Sinar Baru Property. The research method used is a descriptive method and in analyzing and designing the system is an object-oriented analysis and design method using the Unified Modeling Language (Aman, M. and Suroso, 2021). Data collection techniques were carried out by means of observation, interviews and literature studies (Aman, M. et al., 2021). The results of this study are in the form of software, namely a web-based information system for sending and receiving goods that has a good quality level and can function to provide information about shipping and receiving data quickly, precisely and accurately and supports digital concepts (Aman, M. 2021: Anna, et al, 2021).

This research can run optimally, so in this case the researcher limits the problem, namely this research can be focused on the system of sending and receiving goods (Yuliardi, E. 2021). This study is guided by George R.Terry's Management theory (Principles of management) in Malay S.P Hasibuan which consists of Planning, Organizing, Actuating (Implementation/Movement), and Controlling (Supervision) in the work of employees in achieving predetermined performance (Aman, M. et al., 2021).

METHODS

For get a systematic, factual and accurate picture of the facts and characteristics of a particular research object, researchers use descriptive methods. (Riyanto et al., 2021).
Researchers used descriptive methods to get an overview of the system design that was built, starting from the beginning of the system planning until the researchers’ goals were as desired (Nugroho, Y. A, et al., 2023). The object of research is the Sinar Baru property, which has several stages as follows:

![Figure 1. Research steps in system design](image)

**Systems Testing Methods**

To test the application system that is built is to use black box testing. The purpose of system testing is to determine the function, input and output of the software according to the required specifications. In testing, the researcher uses the stages contained in the black box with the intention of making the system fulfill the user's wishes (Mustar, 2020).

**RESULTS AND DISCUSSION**

In analyzing the system, researchers used POAC analysis to build a web-based tourist information system. POAC analysis is carried out with the intention of identifying the level of readiness of each function of the overall functions carried out to achieve the stated goals, as well as for systems designed using an object-oriented system approach that can focus on the current system functionality. Furthermore, the results of the analysis will be visualized and documented with the Unified Modeling Language.

**System Analysis**

Based on the results of observations and interviews, information was obtained about planning, organizing, actuating, and actuating contained in the Sinar Baru Property, namely:

1. Implementation of the Planning Function for the delivery and receiving of goods at Sinar Baru Property has not been
implemented well enough, and the implementation of this planning starts from detailing the unit price of goods, making down payment details, conducting marketing, preparing a rundown of daily activities, organizing employees based on jobdesk, supervising the work of the marketing team, admin and explaining details of payments and repayment systems that are carried out and explaining the steps that consumers need to take until receiving goods, all data processing still uses a conventional system.

2. The Implementation of the Organizing Function for the delivery and receipt of goods at Sinar Baru Property is not good because at the stage where consumers make visits to locations, they pay less attention to employees because their duties are concurrent in handling consumers because during the day consumers visit locations, there is a shortage of employees so they don't work optimally.

3. The implementation of the Actuating Function at Sinar Baru Property is still not optimal in the delivery and receipt of goods because the employees who are mobilized do not understand the instructions or orders from the leadership, so errors often occur and there is still a lack of coordination between superiors and employees.

4. Implementation of the Controlling Function at Sinar Baru Property, the lack of supervision between superiors and employees so that problems in the field when sending and receiving goods often occur because employees do not yet have a computerized system.

From the POAC analysis of the running system above, a system development strategy is created, in accordance with the POAC analysis by looking at the matrix of the shipping and receiving system which produces four alternative strategies, namely creating a strategy by planning, creating a strategy for Organizing, creating a strategy using the Actuating Function and creating strategies that use the Controlling Function (Basyirah, et al, 2020; Hermawati, et al, 2021).

1. The implementation of the Planning and Organizing Functions for the system for sending and receiving goods at Sinar Baru Property has been quite well implemented, starting from making detailed unit prices for goods, making POs, preparing a rundown of daily activities, organizing employees based on jobdesk, supervising the work of the shipping team, admin, team and recipient of goods if there are incoming goods and other crew teams, and data processing, and have been organized for each employee after the company implemented a digital-based web-based information system.

2. The implementation of the Actuating and Controlling Functions in the system for sending and receiving goods at Sinar Baru Property is optimal in its implementation, because the employees who are mobilized already understand instructions or orders from the leader through the system that is built, and Controlling without supervision from superiors, because all procedures and processing data has gone through one door, namely by using a web-based information system application at Sinar Baru Property.

Object Oriented System Analysis

Researchers used Unified Modeling Language (UML) tools to analyze research results and build systems for sending and receiving goods. Before building a system, researchers carry out an analysis to ensure that it will meet the needs of users (Nugroho et al., 2023). By analyzing the system, the researcher can determine the actions required to use the system, who can use it, and when it can be implemented. The author utilizes object-oriented system analysis to design applications, focusing on system functionality. To visualize and implement a shipping and receiving system, researchers used UML diagrams, including four diagrams below:
a. Use case Diagrams

**Figure 2. Use case Diagram**

b. Activity Diagrams

**Figure 3. Registrasi Activity Diagram**

**Figure 4. Login Activity Diagram**

**Figure 5. Receiving Goods Activity Diagram**

**Figure 6. Delivery Activity Diagram**
c. Sequence Diagrams

**Figure 7.** Registration Sequence Diagram

**Figure 8.** Login Sequence Diagram

**Figure 9.** Receiving Goods Sequence Diagram

**Figure 10.** Delivery Sequence Diagram

d. Class Diagrams

**Figure 11.** Class Diagrams

**Interface Design**

**Figure 12.** Registration Input design

**Figure 13.** Login design
4. CONCLUSION

Based on the results of the discussion above, the researcher draws the following conclusions:

1. The information system that is currently running is still implementing a conventional system, so that the implementation of the Planning and Organizing Functions for the delivery and receiving of goods system at Sinar Baru Property has not been implemented well enough, starting from making details of unit prices of goods, making POs, preparing rundown of daily activities, organizing employees based on jobdesk, supervising the work of the delivery team, admin, team and recipient of goods if there are incoming goods and other crew teams, and data processing, and not yet organized for each employee, the same goes for implementing the Implementation function The Actuating and Controlling functions are not optimal in their implementation, because the employees who are mobilized do not understand instructions or orders from the leader, supervision must be carried out from superiors, because all procedures and data processing by employees have not implemented an information system based on digital concepts.

2. To overcome the above obstacles, Sinar Baru Property has built a web-based information system for sending and receiving goods at Sinar Baru Property, and supports digital concepts, so that every problem can be resolved to the fullest.

3. Testing the system results in the researcher's goals, namely to find out the functions, inputs, outputs of the software in fulfilling the wishes of system users.

REFERENCES


